Filing Date: February 27, 2004
Title: MICROSTRIP LIN

MICROSTRIP LINE DIELECTRIC OVERLAY

IN THE CLAIMS

Please amend the claims as follows.

(Currently Amended) A printed circuit board, comprising:

 a substrate having a dielectric constant different from the dielectric constant of free

 space;

at least two microstrip lines routed adjacent to one another on a surface of the substrate, each microstrip separated from a ground plane of the printed circuit board by the substrate; and a dielectric coating applied to at least one of the microstrip lines such that the dielectric constant of the dielectric coating differs from the dielectric constant of free space, and such that the dielectric coating is applied to the at least one microstrip line in a thickness at least half the thickness of the substrate separating the microstrip line from the ground plane,

wherein the dielectric coating comprises a coating material applied over the at least one microstrip line in a thickness greater than an average a thickness of the coating material in at least one other area of the substrate having the coating material applied thereto. across the printed circuit board.

- 2. (Currently Amended) The printed circuit board of claim 1, wherein the dielectric constant of the dielectric coating varies is above or below the dielectric constant 1.0 of free space in the same direction as the dielectric constant of the printed circuit board differs above or below the dielectric constant of free space if the dielectric constant of the printed circuit board is above the dielectric constant 1.0 of free space, and wherein the dielectric constant of the dielectric constant of the printed circuit board is below the dielectric constant 1.0 of free space if the dielectric constant of the printed circuit board is below the dielectric constant 1.0 of free space.
- 3. (Original) The printed circuit board of claim 1, further comprising one or more signal sources driving the at least two microstrip lines.

- (Currently Amended) The printed circuit board of claim 1, further comprising one or 4. more connection points for driving signals onto or for receiving signals from at least one of the at least two microstrip lines.
- 5. (Cancelled)
- 6. (Currently Amended) The printed circuit board of claim 1, wherein the dielectric coating has a dielectric constant of the dielectric coating is approximately the same as the dielectric constant of the printed circuit board.
- 7. (Currently Amended) A memory module, comprising:
 - a printed circuit board;
 - at least one memory integrated circuit mounted to the printed circuit board;
- at least two microstrip lines routed on a surface of the printed circuit board, each microstrip line separated from a ground plane of the printed circuit board substantially by a thickness of printed circuit board material; and

a dielectric coating applied to at least one of the microstrip lines such that the dielectric constant of the dielectric coating differs from the dielectric constant of free space, and such that the dielectric coating is applied to the at least one microstrip line in a thickness at least half the thickness of the printed circuit board material separating the microstrip line from the ground plane;

wherein the dielectric coating comprises a coating material applied over the at least one microstrip line in a thickness greater than an average a thickness of the coating material across the printed circuit board. in at least one area of the substrate having the coating material applied thereto.

(Original) The memory module of claim 7, further comprising at least one connection 8. point for electrically connecting the memory module to other circuitry.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 - EXPEDITED PROCEDURE

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9. (Original) The memory module of claim 7, wherein the dielectric coating comprises a printed circuit board conformal coating material.

10. (Cancelled)

- 11. (Original) The memory module of claim 7, wherein the dielectric coating comprises a material having a dielectric constant greater than one.
- 12. (Currently Amended) The memory module of claim 7, wherein the dielectric coating comprises a material having a dielectric constant of the dielectric coating is approximately equal to the dielectric constant of the printed circuit board.
- 13. (Currently Amended) A microstrip line assembly, comprising:
- a first microstrip line routed on a substrate, the substrate separating the first microstrip line from a ground plane;
 - a second microstrip line routed on the substrate; and
- a dielectric coating applied to the first microstrip line such that the dielectric coating has a dielectric constant different from the dielectric constant of free space, and such that the dielectric coating is applied to the first microstrip line in a thickness at least half the thickness of the substrate separating the microstrip line from the ground plane;

wherein the dielectric coating comprises a coating material applied over the first microstrip line in a thickness greater than an average a thickness of the coating material aeross the substrate in at least one area of the substrate having the coating material applied thereto.

14. (Original) The microstrip line assembly of claim 13, wherein the substrate comprises a printed circuit board comprised of fiberglass, and having a dielectric constant of between four and five.

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15. (Currently Amended) The microstrip line assembly of claim 13, wherein the dielectric eoating comprises a material having a dielectric constant of the dielectric coating is approximately equal to the dielectric constant of the substrate.

16. (Cancelled)

- 17. (Previously Presented) The microstrip line assembly of claim 13, wherein the dielectric coating is applied in a thickness designed to approximately minimize propagation delay difference between the first and second microstrip lines when the signal phase of the first and second microstrip lines is varied.
- 18. (Currently Amended) A method of reducing propagation delay variation in a microstrip line, comprising:

applying a dielectric coating to at least a first microstrip line routed near a second microstrip line, wherein the first microstrip line is separated from a ground plane by a substrate and such that the dielectric coating is applied to the at least one a first microstrip line in a thickness equal to at least half the thickness of the substrate separating the at least one a first microstrip line from the ground plane;

wherein the dielectric coating is applied by applying a coating material over the at least one microstrip line in a thickness greater than an average a thickness of the conformal coating material across the substrate in at least one area of the substrate having the coating material applied thereto.

19-34. (Cancelled)